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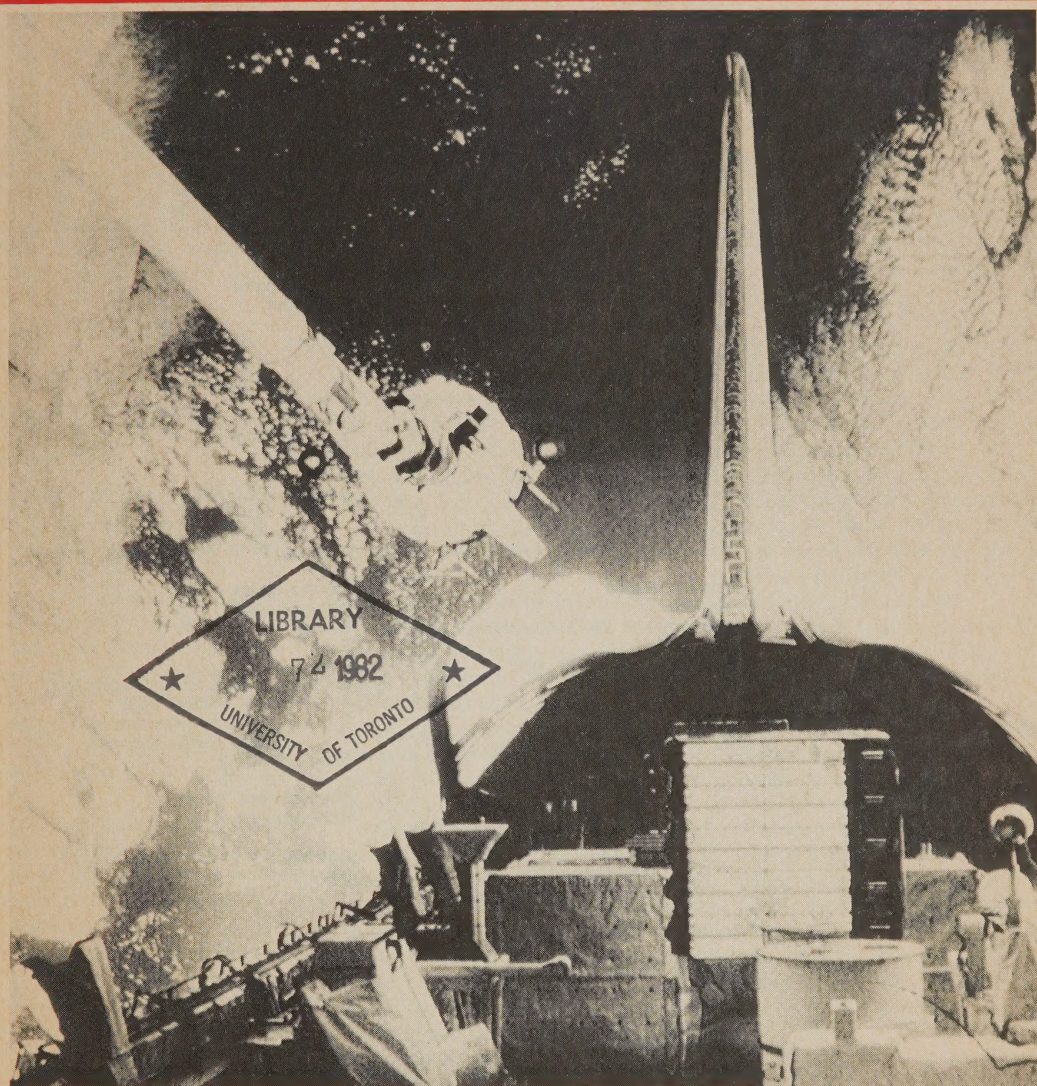
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# APPRENTICESHIP AND YOU



(HTN-3)(April 1)-VIEW AFT--This view aft from the flight deck of the shuttle Columbia while in Earth orbit shows the vertical tail assembly projecting upward between rear engine pods. Payload is in rear of cargo bay, foreground. Remote manipulator system, the Canadian-built arm, top left, handles the plasma diagnostics package to study the interaction of the shuttle with its environment in space.

(AP Laserphoto) (hc 5 0945 ho-NASA)

1982



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# INTRODUCTION TO THE STUDENT

## What is apprenticeship?

Put simply, apprenticeship is an agreement between a person who wants to learn a skill and an employer who needs a skilled worker.

Both the person who is learning and the employer who is training benefit from an apprenticeship. The apprentice becomes a journeyman,\* with skills that can provide him or her with a rewarding career. The employer gains a skilled worker who can help the company succeed.

Apprenticeship is a proven way to learn. It has a long tradition. But it's as important today as it ever was. Canadian journeymen, trained through apprenticeship, have been part of the teams that built:

- the space arm on the shuttle craft *Columbia*
- the CN Tower, the world's tallest free-standing structure
- the Urban Transport Development Corporation train

Journeymen, trained through apprenticeship, also bake your bread, fix your car, build your home, and print what you are reading now.

Apprentices learn these skills through practice. They spend two to five years learning their trade. About 90 per cent of the time is spent in the workplace. The rest is usually spent at a college of applied arts and technology. And while the apprentices are learning, they are earning too. Their employers pay them while they are training.

Apprenticeship training is administered by the Skills Development Division, Ministry of Colleges and Universities, under the Apprenticeship and Tradesmen's Qualification Act.

The more you know about apprenticeship, the better it will work for you. The Skills Development Division prepared this booklet to answer many of the questions you might have about apprenticeship.

## Why should I choose a skilled occupation?

Choosing a career is an important decision. Before you decide, think about who you are, what you like to do, what you would like to be doing 10 years from now. And think about the skilled occupations.

A career in a skilled occupation isn't for everyone, just as a career in medicine isn't for everyone. But it's worth considering.

Most students know what professionals – doctors, lawyers, and accountants – do. But not as many know what skilled workers do. And they don't know whether they would be good skilled workers, or how they would enter a skilled occupation, or what kind of training is available. This booklet gives that information.

Apprenticeship doesn't just prepare you for a job; it prepares you for a rewarding career. So if you're interested in learning more about apprenticeship, read on.

If you're not quite sure about what you'd like to be, contact your guidance counsellor. He or she has a number of tests that can help you find out what you would do well.

## How can I tell if I would make a good apprentice?

One mark of a good apprentice is a positive attitude towards work. To be a good apprentice, you must enjoy working with things and knowing how things work or why they don't work. You must be precise, orderly, and ambitious. And like all valued workers, you must care about the job you are doing. The best training program in the world won't work if you don't care.

You should have a solid foundation in mathematics, English, and science, particularly physics. The technology and equipment used in the workplace are becoming so complicated that a person without this basic knowledge could find apprenticeship training too difficult.

Ideally, an apprentice should have some practical experience, gained either on the job or in a secondary school technical education program. Apprenticeship training is easier and faster if the apprentice already knows some of the basics of the trade. The greater your practical skills, the shorter the training time.

## Regulation and Certification

### What is the difference between a regulated and a non-regulated trade?

Certain skilled trades are regulated, others are non-regulated. Regulated trades are governed by regulations under the Apprenticeship and Tradesmen's Qualification Act. These regulations outline the standards and conditions of training for specific trades.

Non-regulated trades have no formal regulations.

### Will I get a certificate?

As proof of their accomplishment, all apprentices receive a Certificate of Apprenticeship when they complete an apprenticeship program – whether in a non-regulated or regulated trade.

A Certificate of Qualification is available only in regulated trades. To obtain a Certificate of Qualification, you must write an examination.

There are two kinds of regulated trades – compulsory certification and voluntary certification. To practise a trade that requires compulsory certification, you must hold a Certificate of Qualification. Trades that require compulsory certification include electrician, plumber, motor vehicle mechanic, and hairstylist.

A person completing training in a trade that doesn't require certification may choose to write the examination for the Certificate of Qualification. Trades that don't require certification include cook, baker, tool and die maker, farm equipment mechanic, and millwright.

If you obtain a mark of 70 per cent or higher in the examination for the Certificate of Qualification in a specified regulated trade, you will receive an Interprovincial Red Seal on the certificate. The Red Seal permits journeymen to practise their trade in any province without further examination.

\*"Journeyman" is the legislative term. In this document, it is used to refer to both women and men.



## Apprenticeship Programs

### What are the entrance requirements?

In most trades, the minimum educational requirement is Grade 10. However, employers and unions may insist that applicants have a higher educational level as well as credits in specific subjects.

To become an apprentice, you must be at least 16 years old.

### How long does an apprenticeship last?

An apprenticeship is measured in hours of training. For example, 9000 hours for motor vehicle mechanic, 8000 hours for tool and die maker, 3600 hours for automotive painter. A training time of 2000 hours is considered equal to one year's experience.

Apprenticeship training is divided into periods. For example, five periods of 1800 hours each, for a total of 9000 hours, for motor vehicle mechanic; four periods of 2000 hours each, for a total of 8000 hours, for tool and die maker; two periods of 1800 hours each, for a total of 3600 hours, for automotive painter.

Most of the training, about 90 per cent, is given on the job, under the supervision of a qualified journeyman. The remainder is given at a college of applied arts and technology. The college deals with the theoretical and academic aspects of the trade.

Traditionally, apprentices are released from their jobs to attend college for their in-school training. The number and length of in-college terms vary from trade to trade. Many trades have three sessions called Basic, Intermediate, and Advanced. Each session lasts several weeks. For instance, each of the three in-school sessions for general machinist lasts eight weeks. This system of in-college training is called "block release".

Although the block release system is still popular, more flexible systems, such as evening instruction or day release, are available if you and your employer prefer them. "Day release" means that you attend college for one day every one or two weeks.

In most trades, the Basic in-college training is offered before you start the on-the-job training or soon after you have acquired some on-the-job experience. About midway through the apprenticeship, you will attend the Intermediate in-college session. Towards the end of the apprenticeship, you will attend the Advanced in-college session, which will increase your level of performance and prepare you for the examination.

## Credits for Past Experience

### Will I get credits for past experience?

Academic credits and practical skills beyond the minimum level required in a particular trade *may* reduce the length of on-the-job training.

A counsellor at the regional office of the Skills Development Division can *recommend* that you be granted credits for previous experience. However, the employer will make the final decision. Some companies give credit only for experience gained with the company.

The counsellor may recommend that you receive a credit of 50 hours towards each apprenticeship period for each trade-related credit achieved in secondary school or college. A credit in secondary school equals 110 to 120 hours of instruction. Here's an example of credits that may be given for trade-related courses completed in high-school or college.

A student who has completed four credits in machine shop during Grades 11 and 12 *may* be granted a credit of 200 hours (4 credits x 50 hours) in each of the four periods of the general machinist apprenticeship. That's a total of 800 hours (4 periods x 200 hours).

The counsellor may also recommend that you be granted a 50-hour credit in each apprenticeship period for each academic grade achieved beyond the minimum entry level. Usually, seven credits equal one academic grade in secondary school. Here's an example of credits that may be given for completed academic grades beyond the minimum requirement.

The minimum entry level for general machinist is Grade 10. A student who has completed Grade 12 *may* receive a credit of up to 100 hours (2 grades x 50 hours) in each of the four periods of the general machinist apprenticeship, for a total of 400 hours (4 periods x 100 hours).

Combining the two credits as shown in the examples above, the student *may* be granted a credit of 400 hours for completing Grade 12 and 800 hours for completing

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four machine shop credits, for a total of 1200 hours. However, the employer decides on how many hours of credit towards the on-the-job time the apprentice will receive.

It is recommended to the employer that an apprentice who has participated in the Linkage program be excused from all or part of the Basic in-college term.

### What is Linkage?

Linkage is a pre-apprenticeship training program offered by secondary schools.

Linkage can help you begin training for a skilled occupation while you are still in high school. The eight apprenticed occupations in Linkage are:

- baker
- construction millwright
- cook
- general machinist
- hairstylist
- industrial mechanic (millwright)
- motor vehicle mechanic
- retail meat cutter

### How does Linkage work?

Here's an example of how the training system for general machinist usually works.

In 1976, John graduated from high school and decided to become a machinist. He found an employer willing to hire him and train him as an apprentice. His training program lasted four years. About 90 per cent of this time was spent on the job, but he spent about six months at a community college. The in-college time was divided into three terms - Basic, Intermediate, and Advanced.

John had learned a lot in machine shop in high school, but he still had to complete the Basic in-school term. After finishing his apprenticeship, John wrote and passed the examination for the Certificate of Qualification and became a journeyman in 1980.

Now here's an example of how Linkage works.

John's sister, Sarah, started high school in 1977. She took exploratory technical education in Grades 9 and 10. She tried a number of different shops, but liked machine shop most of all. She decided to continue her training in machine shop. In Grade 11, she took a double credit in machine shop. The course included content specified by the Linkage program. In Grade 12, Sarah also took a double credit in machine shop. After she graduated, she found an employer willing to hire her and train her. But she didn't have to complete the Basic in-college term. Why? Because she had completed the Basic term while she was still in high school.

That's how Linkage works. It lets a student gain credit towards all or part of the Basic in-school term.

### How much will I earn on the job?

The employer will pay you a percentage of the current journeyman's wage. The percentage will increase as you complete each period of training. Wages vary from trade to trade. Within one trade, wages vary from workplace to workplace.

For example, if a fully qualified millwright earns \$20 000 a year, an employer would pay a millwright apprentice 60 per cent of that wage, or \$12 000, during the first period of 2000 hours. The employer would then pay 70 per cent of the journeyman's wage during the second period, 80 per cent during the third period, and 90 per cent during the fourth and final period.

In addition to wages, the employer will normally provide you with regular employee benefits.

### Who pays for my in-college training?

Financial assistance may be available to you while you are attending college. Your tuition fees may be paid on your behalf and/or you may receive a living allowance. To determine if financial assistance is available, speak to your employer or contact the regional office of the Skills Development Division.

### Who pays for the tools?

Every journeyman needs tools. These tools can often be quite expensive. Generally, you will buy tools during the apprenticeship training period. By the end of the apprenticeship, you will have a full set of all the basic tools.

Some employers provide tools for their apprentices and journeymen. Others help out by paying part of the cost or by providing low-cost loans.

You should discuss the company's policy on tools with the employer during the recruitment interview and make appropriate arrangements.

### Will I pay union dues?

Workers in some companies have formed a union to represent them in negotiations with the company. The union and the company sign a collective agreement which



## Other Relevant Information

deals with such matters as rates of pay, working conditions, discipline, and other matters. The collective agreement also states which employees must belong to the union and which employees do not have to belong to the union.

As a new employee, you will have to follow the rules in the collective agreement. They might state how much credit will be given for previous experience. The collective agreement might also state that all employees must belong to the union. If this is so, then you must join the union and pay union dues.

The agreement might specify who can apply for a training program such as apprenticeship. For example, you might have to work for the company for a certain number of years before you can apply. Some collective agreements set higher standards than those in the Apprenticeship and Tradesmen's Qualification Act. For instance, the act states that Grade 10 is the minimum educational level required for most apprenticeship programs; however, a collective agreement might require Grade 12. You should ask your employer whether the workers have a union; if they do, you should ask what the collective agreement states about training.

### How do I find an employer willing to train me?

The answer to this question is almost the same as the answer to the question "How do I find a job?"

Finding a job is a job in itself. But there are some basic steps to take in a job search.

- The first step is to make sure that a career in a skilled occupation is right for you. If you end up in the wrong occupation, you won't be happy. If you aren't happy, you won't do a good job.
- The second step is to make sure that you're prepared to find an apprenticeship. Do you have the right attitude towards work? Do you have a good foundation in mathematics, English, and science? Do you have practical skills.
- The last step is to convince an employer that you are ready and prepared to work. Ask your guidance counsellor for booklets that show you how to conduct a job search, how to write a résumé, and how to conduct yourself in a job interview.

If you have difficulty in finding an employer willing to train you, contact a counsellor at the regional office of the Skills Development Division or at the local office of the Canada Employment and Immigration Commission. The counsellor may be able to give you the names of the companies in your area that are looking for apprentices. Your technical director or teacher may also be able to help you.

### How is an apprentice registered?

The registration of apprentices is the responsibility of the regional office of the Skills Development Division.

Either you or the employer can call the regional office and ask one of the counsellors to visit the workplace to register you. The counsellor will make sure that both you and the employer understand what apprenticeship is all about.

The employer will decide how much credit you will receive for skills you already have.

Then, both you and the employer will sign a form, applying for apprenticeship. About six weeks later, the counsellor will return with the apprenticeship contract and answer any other questions you or the employer may have. Both you and the employer will sign the contract and receive a copy.

The counsellor will also give you a Progress Record Book, in which you will record all the skills you learn during apprenticeship. Either you or the employer – or both – may ask for a copy of the Training Profile, to help prepare the training program.

The counsellor will visit the workplace several times during the apprenticeship period to make sure the training is working. And, of course, the counsellor will always be available to offer help or information.

### What happens if things don't work out?

Sometimes a job doesn't live up to your expectations – apprenticeship included. To find out what is wrong, ask yourself the following questions:

- Does your employer know what your expectations are?  
(Perhaps they are too high.)
- Is the employer able to meet your expectations?  
(You may want to learn how to operate a particular piece of equipment but you may not be able to because the machine may be too complicated for you or it may be needed by another employee.)
- Are you doing your fair share?  
(You must do your very best to learn what your employer is trying to teach you. Learning a trade isn't easy; you've got to work at it.)

Most problems between you and your employer can be resolved by talking about them. Maybe the employer doesn't even know you are unhappy with the tasks he or she has given you. Maybe the employer is trying to teach you properly, but doesn't know how. It's worth talking about.

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But if you are sure that the apprenticeship simply isn't going to work out, you can quit your apprenticeship, in the same way that you can quit any job.

If the company has financial problems, and if the collective agreement states that the employees with the least experience must be laid off first, you may be laid off. If you are laid off, contact your industrial consultant who may be able to help you find another training position or to arrange for you to attend college until you find another training position.

If you leave – for whatever reason – you should receive credit for the experience gained during your apprenticeship. You should ask your employer to fill in your Progress Record Book to indicate how many hours you have spent with your employer. Then you can continue your training with another employer. You'll have to find another employer willing to hire and train you and you'll have to be registered again.

If you have any problems, you should contact the regional office of the Skills Development Division and speak to a counsellor who may be able to help straighten things out.



# INTRODUCTION TO THE EMPLOYER

## What is apprenticeship?

Put simply, apprenticeship is an agreement between a person who wants to learn a skill and an employer who needs a skilled worker.

Both the person who is learning and the employer who is training benefit from an apprenticeship. The apprentice becomes a journeyman,\* with skills that can provide him or her with a rewarding career. The employer gains a skilled worker who can help the company succeed.

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## Why should I become involved in apprenticeship training?

Why? Because training is good business. If you have skilled workers on your staff, you know how important they are to your company. A recent report said: "Many employers live in constant fear of unexpectedly losing key tradesmen, one or two of whom can often make an enormous difference to the productivity of an entire plant."

The Ontario Manpower Commission predicts that between 1981 and 1986, Ontario will need about 100 000 skilled workers, but there will be only about 60 000 entering the work force. That's a shortage of about 40 000 skilled workers. And that's a problem.

Training is the solution. And it's a profitable solution. Most employers who train their skilled workers say that the investment in training is more than worth while. Training a skilled worker takes some time and money. But it's an investment in your company's future - a good investment.

## Regulation and Certification

### What is the difference between a regulated and a non-regulated trade?

Certain skilled trades are regulated, others are non-regulated. Regulated trades are governed by regulations under the Apprenticeship and Tradesmen's Qualification Act. These regulations outline the standards and conditions of training for specific trades.

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### What kind of certificate does an apprentice get?

As proof of their accomplishment, all apprentices receive a Certificate of Apprenticeship when they complete an apprenticeship program - whether in a non-regulated or regulated trade.

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Linkage can help a student begin training for a skilled occupation while he or she is still in high school. The eight apprenticed occupations in Linkage are:

- baker
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As an employer, you will pay the apprentice a percentage of the current journeyman's wage. The percentage will increase as the apprentice completes each period of training. Wages vary from trade to trade. Within one trade, wages vary from workplace to workplace.

For example, if a fully qualified millwright earns \$20 000 a year, an employer would pay a millwright apprentice 60 per cent of that wage, or \$12 000, during the first period of 2000 hours. The employer would then pay 70 per cent of the journeyman's wage during the second period, 80 per cent during the third period, and 90 per cent during the fourth and final period.

The federal government may provide a wage subsidy for training in specified occupations.

In addition to wages, you will normally provide the apprentice with regular employee benefits.

### Who pays for the apprentice's in-college training?

Financial assistance *may* be available to an apprentice during the in-college training. College tuition fees may be paid on behalf of the apprentice and/or the apprentice may receive a living allowance while attending college. To determine if financial assistance is available, either you or the apprentice should contact the regional office of the Skills Development Division.

### Who pays for the tools?

Every journeyman needs tools. And these tools can often be quite expensive. Generally, an apprentice will buy tools during the training period. By the end of the apprenticeship, he or she will have a full set of all the basic tools.

Some employers provide tools for their apprentices and journeymen. Others help out by paying part of the cost or by providing low-cost loans.

The employer should discuss the company's policy on tools with the apprentice during the recruitment interview and make appropriate arrangements.

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## Other Relevant Information

### What about collective agreements?

An employer and a union can come to any agreement they want about training as long as the collective agreement does not conflict with the Apprenticeship and Tradesmen's Qualification Act. The act sets the minimum standards; employers and employees may, however, agree to higher standards. For instance, the act states that Grade 10 is the minimum entry level for many apprenticeship programs. However, the union and the employer may decide that Grade 12 is the required minimum for acceptance into the company's training programs.

### What kind of people make good apprentices?

One mark of a good apprentice is a positive attitude towards work. A good apprentice must enjoy working with things and knowing how things work or why they don't work. He or she must be precise, orderly, and ambitious. And like all valued workers, an apprentice must care about the job he or she is doing. The best training program in the world won't work if the apprentice doesn't care.

An apprentice should have a solid foundation in mathematics, English, and science, particularly physics. The technology and equipment used in the workplace are becoming so complicated that a person without this basic knowledge could find apprenticeship training too difficult.

Ideally, an apprentice will have some practical experience, gained either on the job or in a secondary school technical education program. Apprenticeship training is easier and faster if the apprentice already knows some of the basics of the trade. The greater the apprentice's practical skills, the shorter the training time.

### How do I find an apprentice?

There are many young men and women who want to become apprentices. In fact, there are probably more people who want to become apprentices than there are employers willing to train apprentices.

Many employers start by considering their existing employees. In fact, many collective agreements require that present workers be given the first chance to apply for apprenticeship programs. If you have to look outside your company, you could place an advertisement in the local newspaper, or contact the regional office of the Skills Development Division or the local office of the Canada Employment and Immigration Commission.

A number of employers are hiring students directly from secondary school. The technical director of your local secondary school can tell you about promising young men and women who have the necessary attitudes, knowledge, and practical skills to become good apprentices and journeymen.

In any case, you shouldn't have any problem finding a bright, eager, and ambitious apprentice.

### How is an apprentice registered?

The registration of apprentices is the responsibility of the regional office of the Skills Development Division.

Either you, as the employer, or the future apprentice can call the regional office and ask one of the counsellors to visit your workplace to register the apprentice. The counsellor will make sure that you both understand what apprenticeship is all about.

You decide how much credit the apprentice will receive for skills he or she already has.

Then, both you and the apprentice will sign a form, applying for apprenticeship. About six weeks later, the counsellor will return with the apprenticeship contract and answer any other questions you or the apprentice may have. Both you and the apprentice will sign the contract and receive a copy.

The counsellor will also give the apprentice a Progress Record Book, in which the apprentice will record all the skills he or she learns during apprenticeship. Either you or the apprentice – or both – may ask for a copy of the Training Profile, to help you prepare the training program.

The counsellor will visit the workplace several times during the apprenticeship period to make sure the training is working. And, of course, the counsellor will always be available to offer help or information.



**What happens if things don't work out?**  
Sometimes employees don't live up to your expectations – apprentices included. To find out what the problem is, ask yourself some questions such as the following:

- Does the apprentice know what your expectations are?  
(Perhaps they are too high.)
- Is the apprentice able to meet your expectations?  
(An apprentice without good mathematical skills may not be able to complete an apprenticeship program.)
- Are you training the apprentice properly?  
(To become proficient in the use of a complex piece of equipment, the apprentice may need more training time.)

Most problems between you and the apprentice can be resolved by talking about them. Maybe the apprentice doesn't even know you are unhappy with his or her performance. Maybe the apprentice is trying to improve, but doesn't know how. It's worth talking about.

If you have problems with an apprentice, you should contact the regional office of the Skills Development Division and speak to a counsellor who may be able to straighten things out.

But if you are sure that the apprentice simply will not be suitable, you can terminate the apprenticeship in the same way that you terminate any employment.

Lay-offs are another kind of problem. In some cases, the employee with the least experience must be laid off first because of a collective agreement. In other cases, you may choose which employees are laid off first.

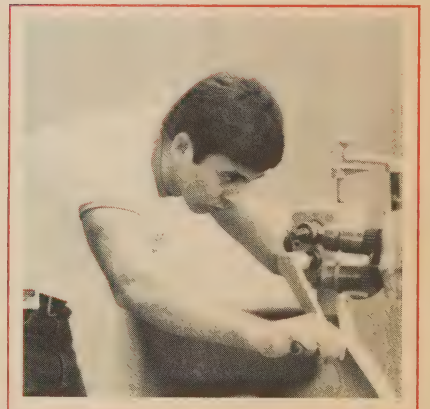
Before you lay off an apprentice, you might ask yourself: "What will it cost the company to train a new apprentice when the business improves?" It may be cheaper in the long run to keep an apprentice on rather than to start the training all over again.

If an apprentice leaves – for whatever reason – he or she should receive credit for the experience gained in your workplace. You simply fill in the apprentice's Progress Record Book to indicate how many hours the apprentice has spent with you. Then the apprentice can continue the training with another employer.

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# **REGULATED AND NON-REGULATED TRADES**





## Construction Trades Regulated

**Brick and Stone Mason**  
*Educational requirements*  
Grade 8 or equivalent.

### *Length of program*

Four periods of 1400 hours, including one in-school session of 8 weeks and two of 7 weeks.

### *Minimum wages*

40, 60, 70, and 80 per cent of journeyman's wage per period.

### *Duties and skills*

Constructs and erects walls, arches, fireplaces, chimneys, smokestacks, and other items of brick and stone masonry components; lays fire-brick and other refractory materials in walls and arches in the construction of furnaces, or in lining furnaces and retorts, or in enclosing boilers, tanks, and heat-treating furnaces.

### *Other information*

This trade came under voluntary certification in December 1970.

Ontario Regulation 19/76.

**Cement Mason**  
*Educational requirements*  
Grade 8 or equivalent.

### *Length of program*

Three periods of 2000 hours each.

### *Minimum wages*

60, 75, and 90 per cent of journeyman's wage per period.

### *Duties and skills*

Finishes concrete flooring by hand or with mechanical equipment, including the application of curing and surface treatments; carries out all phases of waterproofing and restoration of concrete; rubs up and repairs hardened concrete surfaces; places and finishes epoxy, plastic, and other composition materials; finishes and exposes aggregate in pre-cast and architectural concrete.

### *Other information*

This trade came under voluntary certification July 1, 1967.

Ontario Regulation 165/72.

**Construction Boilermaker**  
*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Four periods of 1650 hours, including three in-school sessions of 8 weeks each.

### *Minimum wages*

60, 70, 80, and 90 per cent of journeyman's wage per period.

### *Duties and skills*

Lays out, assembles, and erects boilers, pressure vessels, and heat exchangers, and repairs component parts; reads and understands drawings, specifications, technical literature, and manufacturers' and safety regulations; fits plates, connects steel members, drills, reams, bolts, rivets, welds, and rigs; stress relieves and tests pressure vessels and enclosures using air, water, smoke, and other methods.

### *Other information*

Regulations for this voluntary trade came into force April 12, 1978.

Ontario Regulation 266/78.

### **Construction Millwright**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Four periods of 2000 hours, including one in-school session of 8 weeks and two of 7 weeks.

### *Minimum wages*

60, 70, 80, and 90 per cent of journeyman's wage per period.

### *Duties and skills*

Installs, repairs, and maintains mechanical machines, their components, and related devices and systems in industrial plants, commercial and institutional buildings, or construction sites; has a broad knowledge of metallurgy, welding, blueprint reading, and the use of precise measuring instruments.

### *Other information*

This trade came under voluntary certification December 2, 1972.

Ontario Regulation 543/72.

### **Electrician (Construction and Maintenance)**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Five periods of 1800 hours, including three in-school sessions of 8 weeks each.

### *Minimum wages*

40, 50, 60, 70, and 80 per cent of journeyman's wage per period.

### *Duties and skills*

Lays out, assembles, installs, repairs, maintains, connects, or tests electrical fixtures, apparatus, control equipment, and wiring for systems of alarm, communication, light, heat, or power in buildings or other structures; plans proposed installations from blueprints, sketches, or specifications, or installs panel boards, switch boxes, pull boxes, and other related electrical devices; measures, cuts, threads, bends, assembles, and installs conduits and other types of electrical conductor enclosures that connect panels, boxes, outlets, and other related electrical devices; installs brackets, hangers, or equipment for supporting electrical equipment; installs in or draws electrical conductors through conductor enclosures; prepares conductors for splicing of electrical connections, secures conductor connections by soldering or other mechanical means, or reinsulates and protects conductor connections, or tests electrical equipment for proper function.

### *Other information*

This trade became certified on October 1, 1964; compulsory certification became effective May 1, 1967.

Ontario Regulation 20/76.

### **Electrician (Domestic and Rural)**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Four periods of 1800 hours, including three in-school sessions of 8 weeks each.

### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

### *Duties and skills*

Performs the work of an electrician in the construction, erection, repair, remodelling, or alteration of houses, multiple-dwelling buildings containing six or fewer dwellings, or buildings or structures used for farming; performs maintenance to electrical equipment in houses, multiple-dwelling buildings containing six or fewer dwellings, or farms.

### *Other information*

This trade came under compulsory certification October 1, 1964.

Ontario Regulation 20/76.

### **General Carpenter**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

3844 hours minimum, 7200 hours maximum, including two in-school sessions of 10 weeks each.

### *Minimum wages*

40 per cent of journeyman's wage until successful completion of 5 units or 1800 hours of training and appropriate work experience. The wage then rises to 50 per cent until completion of another 5 units or 1800 hours and again to 60 per cent for a similar period. After completion of 15 units or 5400 hours, the apprentice receives 80 per cent of the journeyman's wage until completion of all 20 units of training and work experience.

### *Duties and skills*

Does the woodwork in the erection, alteration, or repair of structures; builds and erects forms for concrete; erects scaffolds, runways, and hoisting towers; erects partitions; places door frames and window frames; places joists, nailing-strips, and sleepers; lays floors; prepares walls and ceilings for plastering; makes and places door jambs; fits and fixes mouldings; cleans and sands for interior finish; checks all work with plumb level and square, ensuring proper alignment; installs interior fixtures and kitchen cupboards, and prepares and erects panels; lays out and erects stairs and handrails; fits and fixes hardware; fits doors, windows, and fixtures; weatherproofs outside walls. *Does not include* a lather or cabinetmaker.

### *Other information*

This trade came under voluntary certification September 28, 1971.

Ontario Regulation 570/76.

### **Glazier and Metal Mechanic**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Four periods of 2000 hours, including two in-school sessions of 7 weeks and one of 8 weeks.

### *Minimum wages*

60, 65, 70, 75, 80, 85, 90, and 95 per cent of journeyman's wage in each *half* period.

### *Duties and skills*

Performs layout, fabrication, assembly, and installation of extruded frames, hardware, store fronts, wall facings, manual sliding doors, window sashes, manual door closers, automatic



door operators, and curtain walls; performs lay-out, fabrication, assembly, and installation of suspended glass fronts, stuck glass fronts, auto glass, art glass, aquariums, and similar special products; cuts, fits, and installs glass in wood and metal frames for windows, skylights, store fronts, display cases, building fronts, interior walls, ceilings, tables, and similar surfaces by means of mastic, screws, or decorative mouldings; reads and understands design drawings, manufacturers' literature, and installation diagrams.

#### *Other information*

This trade came under voluntary certification August 1, 1970.

Ontario Regulation 34 (as amended by O.R. 408/73).

### **Ironworker**

#### *Educational requirements*

Grade 10 or equivalent and 17 years of age.

#### *Length of program*

Three periods of 2000 hours, including one in-school session of 8 weeks and two of 7 weeks.

#### *Minimum wages*

60, 70, 75, 80, 85, and 90 per cent of journeyman's wages for each half period.

#### *Duties and skills*

Field-fabricates, assembles, installs, handles, hoists, erects, dismantles, reconditions, adjusts, alters, repairs, or services all structural iron work, pre-cast and pre-stressed concrete, concrete reinforcing materials, ferrous and non-ferrous materials in curtain wall, ornamental and miscellaneous metal work, and all other materials used in lieu thereof, and applies sealants where applicable; moves and places machinery and heavy equipment; reads and understands shop and field drawings used in fabrication and erection, including those taken from original architectural and engineering drawings. *Does not include* the fabrication and assembly of materials in an industrial manufacturing plant.

#### *Other information*

This trade came under voluntary certification May 1, 1973.

Ontario Regulation 171/73.

### **Lather**

#### *Educational requirements*

Grade 10 or equivalent.

#### *Length of program*

Three periods of 1800 hours, including two in-school sessions of 10 weeks each.

#### *Minimum wages*

40, 60, and 80 per cent of journeyman's wage per period.

#### *Duties and skills*

In the construction or repair of walls, partitions, ceilings, and arches in any structure: installs by tying, nailing, clipping, or welding wire, metal, or wood lath, plaster board, or other materials and accessories to serve as a base for plaster, cement, or acoustic material; erects plastic and light metal studs, frames, and accessories to receive plaster board and wire and metal lath. *Does not include* the manufacture of equipment or the assembly of a unit before delivery to a building, structure, or site, or the repair and maintenance of the installations in an operating industrial plant.

#### *Other information*

This trade came under voluntary certification June 1, 1967.

Ontario Regulation 16/76.

### **Lineman**

This trade comprises two branches:

Branch 1 – Power Lineman

Branch 2 – Construction Lineman

#### *Educational requirements*

Both branches

Grade 10 or equivalent.

#### *Length of program*

Branch 1 – Power Lineman

Four periods of related training and work experience of 2000 hours each.

Branch 2 – Construction Lineman

Three periods of related training and work experience, one of 2500 hours and two of 2000 hours each.

#### *Minimum wages*

Branch 1 – Power Lineman

40, 50, 60, and 70 per cent of journeyman's wage per period.

Branch 2 – Construction Lineman

40, 55, and 70 per cent of journeyman's wage per period.

#### *Duties and skills*

Branch 1 – Power Lineman

Operates, maintains, and services overhead and underground power lines used to conduct electricity from generating plants to consumers; has knowledge of all trade-related safety practices, rescue techniques, and resuscitation methods; exercises proper use and care of hand and power tools and equipment; installs and removes secondary overhead and underground services and bus, primary conductors, isolating and protective devices, transformers, complete capacitor banks, voltage regulators, and street lighting systems; knows and applies electrical theory, interprets work orders, and makes trade calculations as required.

Branch 2 – Construction Lineman

Constructs or assembles a system of power lines used to conduct electricity from generating plants to consumers; has knowledge of all trade-related safety practices, rescue techniques, resuscitation methods, and hand signals; properly maintains and uses trade-related tools, accessories, and equipment; prepares, installs, and removes structure and related workpiece/component, conductors, isolating and protective devices, reclosures, sectionalizers, and switches; knows and applies electrical theory and rigging principles, and makes necessary calculations; interprets work orders.

#### *Other information*

Both branches of this trade came under voluntary certification November 20, 1979.

Ontario Regulation 862/79.

### **Painter**

This trade comprises two branches:

Branch 1 – Commercial/Residential

Branch 2 – Industrial

#### *Educational requirements*

Both branches

Grade 10 or equivalent.

#### *Length of program*

Branch 1 – Commercial/Residential

Three periods of related training and work experience of 1800 hours each, including one in-school session of 8 weeks and two of 7 weeks.

Branch 2 – Industrial

Two periods of related training and work experience of 1800 hours each.

#### *Minimum wages*

Branch 1 – Commercial/Residential

50, 65, and 80 per cent of journeyman's wage per period.

Branch 2 – Industrial

60 and 80 per cent of journeyman's wage per period.

#### *Duties and skills*

Branch 1 – Commercial/Residential

Prepares and performs interior and exterior work to plaster, wallboard, wood, metal, concrete masonry, stucco, and allied materials; erects scaffolding, including swing stage; prepares and works with steam wallpaper stripping machines, and applies wall coverings, wallpaper, grass cloth, wood veneer, vinyl fabrics, and allied materials.

Branch 2 – Industrial

Prepares and performs interior and exterior work to plaster, wallboard, wood, metal, concrete masonry, stucco, and allied materials; erects scaffolding, including swing stage; prepares and performs work by mechanical processes, blow torches, spray guns, and sand-blasting.

#### *Other information*

Both branches of this trade came under voluntary certification December 25, 1976.

Ontario Regulation 378/81.

### **Plasterer**

#### *Educational requirements*

Grade 8 or equivalent.

#### *Length of program*

Four periods of 1600 hours, including one in-school session of 8 weeks and two of 7 weeks.

#### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

#### *Duties and skills*

Applies plaster and stucco to the walls and ceilings, whether interior or exterior, of a structure; applies plaster and stucco on lath, masonry, and rigid insulation; tapes gypsum panels and wallboard.

#### *Other information*

This trade came under voluntary certification in December 1970.

Ontario Regulation 43/70.

### **Plumber**

#### *Educational requirements*

Grade 10 or equivalent.

#### *Length of program*

Five periods of 1800 hours, including one in-school session of 8 weeks and two of 7 weeks.

#### *Minimum wages*

40, 50, 60, 70, and 80 per cent of journeyman's wage per period.



### **Duties and skills**

Lays out, assembles, installs, maintains, or repairs in any structure, building, or site, piping, fixtures, and appurtenances for the supply of water for any domestic or industrial purpose, or for the disposal of water after it has been used for a domestic or industrial purpose; connects to piping any appliance that uses water supplied to it or disposes of waste; installs the piping for any process, including the conveyance of gas, or any tubing for a pneumatic or air-handling system; makes joints in piping; reads and understands design drawings, manufacturers' literature, and installation diagrams for piping and appliances connected thereto. *Does not include* the manufacture of equipment or the assembly of a unit prior to delivery to a building, structure, or site, the laying of metallic or non-metallic pipe into trenches to form sanitary or storm sewers, drains, or water mains, or the repair and maintenance of the installation in an operating industrial plant.

### **Other information**

This trade became certified in 1965.

Ontario Regulation 44 (as amended by O.R. 77/71, 269/71, 410/73).

### **Refrigeration and Air-conditioning Mechanic**

*Educational requirements*  
Grade 10 or equivalent.

### **Length of program**

Five periods of 1800 hours, including one in-school session of 8 weeks and two of 7 weeks.

### **Minimum wages**

40, 50, 60, 70, and 80 per cent of journeyman's wage per period.

### **Duties and skills**

Installs or assembles any component of a refrigerating or air-conditioning system; assembles or connects any pipe or duct used in piping refrigerant or conditioned air; overhauls or repairs any equipment used in refrigerating or air-conditioning systems; tests, adjusts, or instructs in the operation of refrigerating or air-conditioning systems. *Does not include* the repair or installation of hermetically sealed domestic self-contained appliances of not more than 9000 Btu.

### **Other information**

This trade became certified November 1, 1964.

Ontario Regulation 612/73 (as amended by O.R. 17/76).

### **Sheet Metal Worker**

*Educational requirements*  
Grade 10 or equivalent.

### **Length of program**

Five periods of 1800 hours, including one in-school session of 8 weeks and two of 7 weeks.

### **Minimum wages**

40, 50, 60, 70, and 80 per cent of journeyman's wage per period.

### **Duties and skills**

Manufactures, fabricates, assembles, handles, erects, installs, dismantles, reconditions, adjusts, alters, repairs, or services all ferrous and non-ferrous sheet metal work of No. 10 US gauge, or of any equivalent or lighter gauge, and all other materials used in lieu thereof; reads and understands shop and field sketches

used in fabrication and erection, including those taken from original architectural and engineering drawings or sketches. *Does not include* work in production commonly known as mass production.

### **Other information**

This trade became certified October 1, 1965, and came under compulsory certification October 1, 1967.

Ontario Regulation 298/73.

### **Sprinkler and Fire Protection Installer**

*Educational requirements*  
Grade 10 or equivalent.

### **Length of program**

Four periods of 1800 hours, including two in-school sessions of 7 weeks and one of 8 weeks.

### **Minimum wages**

40, 60, 70, and 80 per cent of journeyman's wage per period.

### **Duties and skills**

Lays out, assembles, installs, tests, and maintains high and low pressure pipeline systems for supplying water, air, foam, carbon dioxide, or other materials to or for fire protection systems; measures, cuts, reams, threads, solders, bolts, screws, welds, or joins all types of piping, fittings, or equipment for fire protection systems. *Does not include* the manufacture of equipment or the assembly of a unit prior to delivery to a building, structure, or site.

### **Other information**

This trade came under voluntary certification January 24, 1976.

Ontario Regulation 420/80.

### **Steamfitter**

*Educational requirements*  
Grade 10 or equivalent.

### **Length of program**

Five periods of 1800 hours, including one in-school session of 8 weeks and two of 7 weeks.

### **Minimum wages**

40, 50, 60, 70, and 80 per cent of journeyman's wage per period.

### **Duties and skills**

Lays out, assembles, installs, maintains, or repairs any heating system, cooling system, process system, or industrial system; installs or connects piping in any building or structure; installs the piping for any process, including a process that conveys gas, or the tubing for any pneumatic or air-handling system; reads and understands design drawings, manufacturers' literature, and installation diagrams for any system referred to. *Does not include* the manufacture of equipment or the assembly of a unit prior to delivery to a building, structure, or site.

### **Other information**

This trade became certified October 1, 1965, and came under compulsory certification October 1, 1967.

Ontario Regulation 124/73.

## **Construction Trades**

### **Non-regulated**

#### **Draftsman (Architectural)**

*Educational requirements*  
Grade 10 or equivalent.

### **Length of program**

Three periods of 2000 hours each.

### **Minimum wages**

40, 50, and 60 per cent of journeyman's wage per period.

### **Duties and skills**

Prepares drawings showing internal, external, or other architectural features of office blocks, residential structures, and industrial, commercial, and other buildings; prepares preliminary sketches showing proposed internal, external, and other principal features, as directed by architect; makes calculations to determine type and quality of materials required; prepares working drawings showing plans, elevations, sections, and typical details for use on construction site, using a variety of drafting instruments; may estimate quantities of materials required for project and compute costs.

#### **Drywall and Acoustic Mechanic**

*Educational requirements*  
Grade 10 or equivalent.

### **Length of program**

Three periods of 1500 hours each.

### **Minimum wages**

50, 60, and 70 per cent of journeyman's wage per period.

### **Duties and skills**

Applies wallboard sheets to ceilings and interior walls of buildings; measures area to be covered using straightedge or tape as gauge; cuts sheets to size and cuts out openings; seals joints between wallboards to prepare surface for papering or painting; sands seams and other rough areas of drywall construction, using sanding machine or hand-operated sanding block; installs thermal acoustic insulation and sound absorption materials.

#### **Terrazzo, Tile, and Marble Setter**

*Educational requirements*  
Grade 10 or equivalent.

### **Length of program**

Four periods of 2000 hours each.

### **Minimum wages**

40, 50, 60, and 70 per cent of journeyman's wage per period.

### **Duties and skills**

Installs decorative surfacings composed of cement, sand, pigment or chemical compounds, marble, or other aggregates on floors, stairs, and other surfaces; installs reinforcing and underbeds; forms first layer, cuts and installs metal division strips, spreads and trowels top layer; rolls marble or other aggregates into surface; may grout, grind, polish, and seal hardened terrazzo surfaces; sets tiles to surface walls and floors, according to specified designs; applies metal lath, scratch coat, and setting bed; cuts, trims, fits, and installs tiles and required accessories; cuts and sets marble slabs to make ornamental and protective surfaces; installs anchor bolts, wires, and brackets; applies mortar; trims and sets marble slabs in accordance with design drawings.



## **Industrial Trades Regulated**

### **Fitter (Structural Steel/Platework)**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Three periods of 1800 hours, including three in-school sessions of 8 weeks each.

#### *Minimum wages*

60, 70, and 80 per cent of journeyman's wage per period.

#### *Duties and skills*

Reads and interprets blueprints; performs measuring, checking, and layout operations; assembles metal plates and sections, using tack welding, fasteners, and bolts; uses hand and power tools, including bending and straightening equipment; moves finished products using cranes, slings, or other lifting equipment.

#### *Other information*

This trade came under voluntary certification December 1, 1980.

Ontario regulation 990/80.

### **General Machinist**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of at least 1500 hours (8000 hours maximum), including three in-school sessions of 8 weeks each.

#### *Minimum wages*

Starting at 50 per cent of journeyman's wage and increasing by 5 per cent for every 1000 hours of training completed.

#### *Duties and skills*

Sets up and operates various types of precision metal-cutting and grinding machines to close tolerances; has a broad understanding of metallurgy; is familiar with the use and care of precision measuring equipment; has a detailed knowledge of blueprint reading.

#### *Other information*

This trade came under voluntary certification June 17, 1978.

Ontario Regulation 866/80.

### **Industrial Mechanic (Millwright)**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 2000 hours each, including three in-school sessions of 8 weeks each.

#### *Minimum wages*

60, 70, 80, and 90 per cent of journeyman's wage per period.

#### *Duties and skills*

Installs, repairs, and maintains mechanical machines, their components, and related pneumatic and hydraulic systems in industrial plants or specific process areas; has a broad knowledge of metallurgy, welding, blueprint reading, and the use of precision measuring instruments.

#### *Other information*

This trade came under voluntary certification September 21, 1979.

Ontario Regulation 685/79.

### **Industrial Woodworker**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 2000 hours each, including three in-school sessions of 8 weeks each.

#### *Minimum wages*

50, 60, 75, and 85 per cent of journeyman's wage per period.

#### *Duties and skills*

Sets up and operates a variety of machinery used in the construction and fabrication of products manufactured from wood and related materials, such as cabinets, furniture, doors, and door frames, according to specifications; verifies dimensions of parts, using drawings, blueprints, or templates; assembles parts, using hand or power tools; applies veneers and plastic laminates; may apply finishing materials and trimming hardware; may prepare working drawings or sketches of work to be produced.

#### *Other information*

This trade came under voluntary certification February 1, 1982.

Ontario Regulation 873/81.

### **Mould Maker**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 2000 hours each, including three in-school sessions of 8 weeks each.

#### *Minimum wages*

Starting at 50 per cent of journeyman's wage and increasing by 5 per cent for every 1000 hours of training completed.

#### *Duties and skills*

Makes, repairs, and modifies moulds, models, and templates; works to close tolerances and criteria in all operations; has a detailed knowledge of blueprint and drawing interpretation, plastics, and processing methods and equipment; should have a broad understanding of metallurgy and heat treatment, and a working knowledge of the use, care, and operation of machine tools and equipment.

#### *Other information:*

This trade came under voluntary certification June 17, 1978.

Ontario Regulation 867/80.

### **Printer**

This trade comprises eight branches:

- Branch 1 – Letterpress (Job Shop)
- Branch 2 – Lithography (Job Shop)
- Branch 3 – Offset Pressman (Plant)
- Branch 4 – Linotype Operator
- Branch 5 – Compositor
- Branch 6 – Pressman (Letterpress)
- Branch 7 – Compositor (Phototypesetting)
- Branch 8 – Compositor and Camera Technician

#### *Educational requirements*

All branches  
Grade 10 or equivalent.

#### *Length of program*

Branches 1-7  
Four periods of related training and work experience of 2000 hours each.

#### *Branch 8*

Five periods of related training and work experience of 2200 hours each.

#### *Minimum wages*

All branches

Not less than the minimum wage prescribed by the Employment Standards Act plus an increase of at least 20 per cent for each period of related training and work experience.

#### *Duties and skills*

Branch 1 – Letterpress (Job Shop)

Practises shop safety; performs routine maintenance of equipment; handles paper, ink, and other supplies; composes type; produces, reads, and corrects proofs; makes up pages; uses photoengravings, electrotypes, and rubber and plastic plates; locks up, using various methods and techniques; operates printing presses, feed and delivery systems; mixes and matches ink; performs finishing processes in bindery; packages and labels.

Branch 2 – Lithography (Job Shop)

Practises shop safety; prepares photographic and plate-coating solutions; files plates and negatives; handles paper, ink, and chemicals; may plan job; performs layout operations; composes type; uses, reads, and marks proofs; performs camera copy reproduction; applies theory of photography and uses various types of cameras, filters, and techniques of line and half-tone photography; develops film; lays out and strips flats; produces various types of plate; knows about and uses inks; operates and maintains lithographic process printing presses; performs bindery and other finishing operations.

Branch 3 – Offset Pressman (Plant)

Practises shop safety; washes plates; builds up back of plate; installs plate, checks registration, and operates press; removes and cleans plate and cylinders at end of run.

Branch 4 – Linotype Operator

Practises shop safety; operates keyboard-controlled typesetting machine to cast in metal lines of type (slugs) and deposit them in a galley; selects magazine corresponding to specified typeface and size; sets up linotype machine to cast designated type and assemble slugs in galley; removes galley and passes for proof printing; sets new slugs to correct errors as indicated on proof sheet; places pigs of type metal on feed chain of melting pot to replenish supply.

Branch 5 – Compositor

Practises shop safety; sets type by hand or machine, and assembles type and cuts in galleys; determines type size, style, and layout from worksheet; measures copy with gauges to calculate length of line and depth of column; sets composing stick to line length indicated on gauge; selects and sets type in compositional sequence; adjusts spacing; examines symbols made by proofreader and makes any corrections necessary; cleans type after use, and sorts and stores letters and spacers; may operate proof press to take proofs; may set type to print copy that is unaccompanied by specifications, using knowledge of composition and printing processes; carries out bindery and other finishing operations.

Branch 6 – Pressman (Letterpress)

Practises shop safety; performs routine maintenance of equipment; sets up letterpress printing press and colour position; mixes special colour inks; makes pasters and operates paster equipment; inspects and handles paper rolls; operates main level of press and applies knowledge of leads; performs colour setting, including black



and colour pages; does folder work, including changing and replacing of slitters, web control, and setting up of straight and collect folders; operates and maintains towers, processors, and punch, bend, and trim equipment.

**Branch 7 – Compositor (Phototypesetting)**  
Practises shop safety; understands hot, cold, and non-metallic composition and colour printing; operates various types of printing presses and binding equipment; handles paper and other printing stock; does advertising artwork and layout; designs business forms; composes advertising, forms, and books; lays out pages in correct order for press; performs colour separations (before camera); makes plates; interprets proofreader marks and reads proof; operates phototypesetter to include various styles and tabulating.

**Branch 8 – Compositor and Camera Technician**  
Practises shop safety and performs routine maintenance of equipment; prepares photographic solutions, and files negatives, chemicals, and supplies; applies graphic design principles and uses proper equipment and materials to produce rough, composing, and finished layouts; uses phototypesetting, hand lettering, and transfer lettering in layouts and page and display composition; uses mechanical colour, register systems, general assembly ruling, crop marks, and impositions; reads and marks proofs, using accepted marks and symbols, and makes corrections; prepares copy for shooting, figuring reductions and enlargements, and uses various types of cameras; uses equipment and techniques for line photography and half-tone photography; selects proper film and colour-proofing materials for use in contact printing; processes film; performs stripping for presswork, impositions, and supers; has a knowledge of screens and determines percentage dots, morays, and effects; uses various methods of separating for colour printing.

#### *Other information*

All branches of this trade came under certification October 18, 1980.

Ontario Regulation 814/80.

#### **Tool and Die Maker**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 2000 hours each, including three in-school sessions of 8 weeks each.

#### *Minimum wages*

Starting at 50 per cent of journeyman's wage, increasing by 5 per cent for every 1000 hours of training completed.

#### *Duties and skills*

Makes, repairs, and modifies dies, forms, cutting tools, gauges, jigs, and fixtures; works to close tolerances in all phases of job; has a detailed knowledge of blueprint reading and interpretation; should have a broad understanding of metallurgy and a working knowledge of the use, care, and operation of machine tools and related equipment.

#### *Other information*

This trade came under voluntary certification June 17, 1978.

Ontario Regulation 868/80.

## **Industrial Trades**

### **Non-regulated**

#### **Carpenter (Plant)**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 1800 hours each.

#### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

#### *Duties and skills*

In an industrial plant or industrial processing area: cuts, shapes, assembles, erects, and maintains various types of wood structures and fittings, using hand and power tools; makes, alters, and repairs structural woodwork and objects, at bench or on location, by performing general carpentry operations such as sawing, planing, fitting, nailing, and glueing; builds, assembles, places, and dismantles concrete forms; cuts, fits, and installs doors, door frames, window frames, staircases, and interior and exterior trim; lays hardwood flooring and floor and ceiling tile; builds scaffolds, walls, floors, partitions, roofs, docks, trusses, and bases for equipment and machines.

#### **Chemical Plant Operator**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Three periods of 2000 hours each.

#### *Minimum wages*

40, 50, and 60 per cent of journeyman's wage per period.

#### *Duties and skills*

Operates control panels which control distillation trains, chemical reactors, pumps, compressors, and heat exchangers; ensures reactions are controlled according to standard practice; operates and controls filters, blenders, steam, electric, and gas heating devices, decanters, mixers, dryers, pumps, compressors, vacuum jets and pumps, conveyors, fans, and blowers; fills containers, tank cars, tank trucks, and storage tanks; calculates yields, blends, and mixes; inspects and reports on mechanical condition of all equipment used; ensures that safe practices and standards are maintained and followed.

#### **Draftsman (Mechanical)**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Three periods of 2000 hours each.

#### *Minimum wages*

40, 50, and 60 per cent of journeyman's wage per period.

#### *Duties and skills*

Prepares working plans and other technical drawings from sketches or notes for machines, engines, jigs and fixtures, mechanical equipment, and various types of products for engineering, manufacturing, illustrative, and other purposes; checks dimensions of parts, materials to be used, the relation of one part to another, and the relationship of the various parts to the whole unit; prepares finished drawings, making necessary calculations and utilizing knowledge of various machines and engineering manufacturing practices.

## **Electrician (Plant Maintenance)**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 2000 hours each.

#### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

#### *Duties and skills*

In an industrial plant: installs conduit, junction boxes, and switches; pulls, insulates, and seals cables; installs, aligns, hooks up, and tests machines; installs lighting, control, communications, and heating systems; maintains, cleans, and repairs starters, switches, controllers, circuit breakers, etc.; overhauls and repairs AC and DC motors and generators; rewinds armatures and stators, and skims and undercuts commutators; carries out static and dynamic balancing, removal, and replacement of bearings, couplings, drives, V-belts, etc.; aligns bearings, couplings, and drives; tests continuity and insulation; checks and adjusts electronic industrial controls.

#### **Electronics Mechanic (Industrial Control)**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 2000 hours each.

#### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

#### *Duties and skills*

Installs, tests, calibrates, and repairs electronic control, monitoring, and communications equipment in an industrial plant.

#### **Oil-Burner Mechanic**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Two periods of 1800 hours each.

#### *Minimum wages*

40 and 50 per cent of journeyman's wage per period.

#### *Duties and skills*

Installs, cleans, repairs, overhauls, adjusts, and removes oil-burner installations, and is licensed in accordance with the regulations of the Ontario Ministry of Consumer and Commercial Relations, Technical Standards Division, Fuels Safety Branch.

#### **Patternmaker**

*Educational requirements*  
Grade 10 or equivalent.

#### *Length of program*

Four periods of 2000 hours each.

#### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.



### **Duties and skills**

Builds, shapes, or repairs wood and metal patterns to drawings or specifications, using trade-related hand and power tools, woodworking machines, and machine tools; makes or repairs patterns, including die-block patterns, following blocks for die-sinking machines, using gypsum plasters and cements, poured resin, or fibre-glass and resin lay-ups; machines and finishes to drawings or specifications.

### **Sheet Metal Worker (Plant)**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Four periods of 2000 hours each.

### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

### **Duties and skills**

In an industrial plant: fabricates, installs, or repairs sheet metal products used for plant maintenance, dust collection, ventilation systems, and plant processes, using trade-related hand and power tools and equipment; selects gauge of materials specified in blueprints and drawings; does the layout, measuring, and planning for efficient shop fabrication; sets up, operates or uses, and maintains power shears, power saws, punch presses, press brakes and rolls, crimpers, drills, grinders, nibblers, and oxyacetylene, arc welding, and spot welding equipment.

### **Welder (Arc and Gas)**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Four periods of 2000 hours each.

### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

### **Duties and skills**

Welds metal parts together, according to layouts, blueprints, or work orders, using both gas welding and any combination of arc welding processes such as manual, automatic and semi-automatic, inert gas, and submerged arc; may perform flame-cutting and grinding.

### *Other information*

To weld on boilers, pressure vessels, and pressure piping, it is necessary to pass Qualification Tests specified by the Ontario Ministry of Consumer and Commercial Relations, Technical Standards Division, Pressure Vessels Safety Branch.

## **Motive Power Trades Regulated**

### **Air-cooled and Marine Engine Mechanic**

This trade comprises four branches:

Branch 1 – Small Engine Mechanic

Branch 2 – Marina and Small Powered Equipment Mechanic

Branch 3 – Small Engine Mechanic (Construction)

Branch 4 – Boat Motor Mechanic

### *Educational requirements*

All branches

Grade 10 or equivalent.

### *Length of program*

Branches 1-3

Two periods of 2000 hours each, including two in-school sessions of 10 weeks each.

Branch 4

Four periods of 1800 hours each, including two in-school sessions of 10 weeks each.

### *Minimum wages*

All branches

Not less than the minimum wage prescribed by the Employment Standards Act plus an increase of at least 20 per cent for each period of related training and work experience.

### **Duties and skills**

Branch 1 – Small Engine Mechanic

Using hand tools, repairs small air-cooled gasoline engines used to power lawnmowers, snowblowers, chainsaws, garden tractors, snowmobiles, portable pumps, and generator sets, as well as air- or water-cooled outboard motors; locates causes of trouble, using hand tools and instruments; dismantles engines and examines for defects; replaces or repairs and reconditions parts, using hand or power tools; cleans, overhauls, repairs, and adjusts carburetors and fuel systems, coil and magneto ignition systems, electrical systems, power trains, and associated components; tests performance of repaired or overhauled engines, components, and units.

Branch 2 – Marina and Small Powered Equipment Mechanic

Tests and inspects, locates faults in, maintains, repairs, overhauls, and prepares for storage small air-cooled gasoline engines used to power motor boats and small powered equipment, using instruments and hand and power tools; performs similar work on water-cooled marine engines and stern drive units; cleans, overhauls, repairs, and adjusts carburetors and fuel systems, coil and magneto ignition systems, electrical systems, power trains, and associated components; tests performance of repaired or overhauled engines, components, and units; tests, adjusts, maintains, and performs minor repairs to electric system of auxiliary power generating units; cleans, maintains, repairs, and refinishes wooden, aluminum, and fibreglass boat hulls and fittings.

Branch 3 – Small Engine Mechanic (Construction)

Repairs small air- and water-cooled internal combustion engines used to power construction tools and equipment: chainsaws, small tractors, portable pumps, air compressors, and generator sets; locates causes of trouble, using hand tools and instruments; dismantles engines and examines for defects; replaces or repairs and reconditions parts, using hand or power tools; cleans, overhauls, repairs, and adjusts carburetors and fuel systems, coil and magneto ignition systems, electrical systems, power trains, and

associated components; tests performance of repaired or overhauled engines, components, and units.

Branch 4 – Boat Motor Mechanic

Installs, repairs, adjusts, overhauls, or converts gasoline and diesel boat motors, clutches, gearboxes and reduction gears, shafts, propellers, steering gear, controls, instruments, and fuel, ignition, electrical, cooling, and exhaust systems; may also install marine hardware, holding tanks, and water and fire protection systems; carries out water tests of boats to ensure correct and safe operation of all equipment to comply with regulations; prepares boats, motors, and related systems and equipment for storage.

### *Other information*

All branches of this trade came under voluntary certification July 5, 1980.

Ontario Regulation 20.

### **Alignment and Brakes Mechanic**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Three periods of 1800 hours, including two in-school sessions of 8 weeks each.

### *Minimum wages*

50, 70, and 90 per cent of journeyman's wage per period.

### **Duties and skills**

Inspects, diagnoses faults in, disassembles, adjusts, services, repairs, overhauls, and assembles front and rear suspension systems and brake system components, including such items as wheels, tires, springs, and shock absorbers; inspects frame alignment and realigns as necessary.

### *Other information*

This trade came under compulsory certification April 1, 1969.

Ontario Regulation 19/70.

### **Auto Body Repairer**

*Educational requirements*  
Grade 8 or equivalent.

### *Length of program*

Four periods of 1800 hours, including one in-school session of 8 weeks and one of 7 weeks.

### *Minimum wages*

50, 60, 80, and 90 per cent of journeyman's wage per period.

### **Duties and skills**

Hammers out dents in body panels, fenders, and skirting; files, grinds, sands, fills, and finishes ready for priming any dented or pierced area; uses heat to shrink or stretch metal panels; welds breaks in body areas; tests for and corrects faulty alignment of frames and "unicoupe" bodies; primes finished work; removes and installs body parts; replaces glass.

### *Other information*

This trade became certified in October 1944, and came under compulsory certification October 21, 1946.

Ontario Regulation 20/70.

**Automotive Machinist**  
*Educational requirements*  
Grade 10 or equivalent.

*Length of program*  
Four periods of 1800 hours, including one in-school session of 8 weeks and two of 7 weeks.

*Minimum wages*  
60, 70, 80, and 90 per cent of journeyman's wage per period.

*Duties and skills*  
Reconditions and rebuilds internal combustion engines and associated components; reconditions power trains and brake and suspension system components.

*Other information*  
This trade came under voluntary certification April 1, 1969.

Ontario Regulation 864/80.

**Automotive Painter**  
*Educational requirements*  
Grade 8 or equivalent.

*Length of program*  
Two periods of 1800 hours, including one in-school session of 8 weeks.

*Minimum wages*  
60 and 80 per cent of journeyman's wage per period.

*Duties and skills*  
Sands, fills, primes, and applies finishing paint; dries and bakes newly painted surfaces; masks and tapes surfaces for multi-tone paint application; knows and obeys safety rules to be followed during painting; mixes paints and ingredients and matches colours; refinishes galvanized outer panels and anodized aluminum mouldings.

*Other information*  
This trade came under voluntary certification April 1, 1969.

Ontario Regulation 102/69.

**Farm Equipment Mechanic**  
*Educational requirements*  
Grade 10 or equivalent.

*Length of program*  
Five periods of 1800 hours, including one in-school session of 14 weeks and two of 8 weeks.

*Minimum wages*  
50, 60, 70, 80, and 90 per cent of journeyman's wage per period.

*Duties and skills*  
Inspects, diagnoses faults in, disassembles, adjusts, services, repairs, overhauls, and assembles all components of farm machinery, including steering mechanisms, brakes, engines, power trains, and suspension, air-conditioning, fuel, and electrical systems.

*Other information*  
This trade came under voluntary certification October 5, 1971. This Apprentice Training Program replaces the Farm Machinery Servicing Program previously offered by the Ontario Ministry of Agriculture and Food at the Ontario Agricultural College, Guelph, to trainees selected and sponsored by farm equipment dealers.

Ontario Regulation 395/71.

**Fuel and Electrical Systems Mechanic**  
*Educational requirements*  
Grade 10 or equivalent.

*Length of program*  
Three periods of 1800 hours, including two in-school sessions of 8 weeks each.

*Minimum wages*  
50, 70, and 90 per cent of journeyman's wage per period.

*Duties and skills*  
Diagnoses faults in, disassembles, adjusts, services, repairs, and assembles components of motor vehicles, including electrical, fuel, ignition, and air-conditioning systems; performs minor and major engine tune-ups.

*Other information*  
This trade became certified in October 1944, and came under compulsory certification October 21, 1946.

Ontario Regulation 32/70.

**Heavy Duty Equipment Mechanic**  
*Educational requirements*  
Grade 10 or equivalent.

*Length of program*  
Five periods of 1800 hours, including one in-school session of 12 weeks and two of 7 weeks.

*Minimum wages*  
50, 60, 70, 80, and 90 per cent of journeyman's wage per period.

*Duties and skills*  
Inspects, diagnoses faults in, disassembles, adjusts, services, repairs, overhauls, and assembles all components of heavy duty equipment, including steering mechanisms, brakes, engines, power trains, and suspension, fuel, and electrical systems.

*Other information*  
This trade came under voluntary certification April 1, 1969.

Ontario Regulation 419/80.

**Motorcycle Mechanic**  
*Educational requirements*  
Grade 10 or equivalent.

*Length of program*  
Three periods of 1800 hours, including two in-school sessions of 8 weeks each.

*Minimum wages*  
50, 70, and 90 per cent of journeyman's wage per period.

*Duties and skills*  
Inspects, diagnoses faults in, disassembles, adjusts, services, repairs, and overhauls all components of motorcycles, including forks, frames, brakes, engines, power trains, and suspension, fuel, and electrical systems.

*Other information*  
This trade came under compulsory certification April 1, 1969.

Ontario Regulation 865/80.

**Motor Vehicle Mechanic**  
*Educational requirements*  
Grade 10 or equivalent.

*Length of program*  
Five periods of 1800 hours, including three in-school sessions of 8 weeks each.

*Minimum wages*  
50, 60, 70, 80, and 90 per cent of journeyman's wage per period.

*Duties and skills*  
Inspects, diagnoses faults in, disassembles, adjusts, services, repairs, overhauls, and assembles all components of motor vehicles, including steering mechanisms, brakes, engines, power trains, and suspension, air-conditioning, fuel, and electrical systems.

*Other information*  
This trade was introduced in Ontario in 1928, certified in 1937 under the Apprenticeship and Tradesmen's Qualification Act, and came under compulsory certification October 21, 1946. An alternative program to this is the three-year Motor Vehicle Mechanic apprenticeship program. Under this program, the apprentice attends a 40-week in-school program immediately after being registered and before going on to the on-the-job phase of training. This program is divided into five periods, the first being 1600 hours; the second, 768 hours; and each subsequent period, 1184 hours. The apprentice receives a training allowance for the first period (while at school); 60 per cent of a journeyman's wage for the second period; 70 per cent for the third; 80 per cent for the fourth; and 90 per cent for the fifth and final period. This is a popular program since jobs are found for the apprentices, but enrolment is limited.

Ontario Regulation 464/80.

**Service Station Attendant**  
*Educational requirements*  
Grade 8 or equivalent.

*Length of program*  
Two periods of 1800 hours, including one in-school session of 8 weeks.

*Minimum wages*  
60 and 80 per cent of journeyman's wage per period.

*Duties and skills*  
Lubricates vehicles; maintains cooling systems, batteries, lights, horns, miscellaneous circuits, spark plugs, belts, and hydraulic levels; replaces complete exhaust systems or parts; repairs tires and tubes, and balances wheels.

*Other information*  
This trade came under voluntary certification April 1, 1969.

Ontario Regulation 103/69.



## **Transmission Mechanic**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Three periods of 1800 hours, including two in-school sessions of 8 weeks each.

### *Minimum wages*

50, 70, and 90 per cent of journeyman's wage per period.

### *Duties and skills*

Inspects, diagnoses faults in, disassembles, adjusts, services, repairs, overhauls, and assembles all motor vehicle transmissions, both automatic and standard, and drive shafts; is familiar with the effects of other components of motor vehicles on the operation of transmissions and drive shafts.

### *Other information*

This trade came under compulsory certification April 1, 1969.

Ontario Regulation 49/70.

## **Truck-Trailer Repairer**

*Educational requirements*  
Grade 10 or equivalent.

### *Length of program*

Three periods of 1800 hours, including two in-school sessions of 8 weeks each.

### *Minimum wages*

50, 70, and 90 per cent of journeyman's wage per period.

### *Duties and skills*

Inspects, diagnoses faults in, disassembles, adjusts, services, repairs, overhauls, and assembles all components of truck trailers, including suspension systems, frames, brakes, and electrical and air-conditioning systems.

### *Other information*

This trade came under compulsory certification April 1, 1969.

Ontario Regulation 50/70.

## **Service Trades Regulated**

### **Baker**

This trade comprises three branches:

Branch 1 – Junior Baker

Branch 2 – Baker

Branch 3 – Pâtissier

### *Educational requirements*

All branches

Grade 8 or equivalent.

### *Length of program*

Branch 1 – Junior Baker

One period of 2000 hours, including one in-school session of 15 weeks.

Branch 2 – Baker

Three periods of 2000 hours, including two in-school sessions of 15 weeks each.

Branch 3 – Pâtissier

Four periods of 2000 hours, including two in-school sessions of 15 weeks and one session of 5 weeks.

### *Minimum wages*

All branches

Not less than the minimum wage prescribed by the Employment Standards Act plus an increase of at least 20 per cent for each period of related training and work experience.

### *Duties and skills*

Branch 1 – Junior Baker

Prepares ingredients, straight dough, different types of fermented goods, pies, sweet and puff paste goods, cookies, muffins, tea biscuits, and doughnuts; assists in bakery formulation and fermentation processes; has knowledge of sanitation and safety equipment.

Branch 2 – Baker

Supervises bakery formulation, fermentation, stock control, receiving and issuing, product costing, and ingredient and material purchasing; has knowledge of sanitation and safety equipment; prepares puddings and desserts, pastry and choux paste, bread and rolls, icings and fillings, and cakes and creams.

Branch 3 – Pâtissier

Prepares specialty cakes, pastries, petits fours, chocolate and couverture specialty cookies, and wedding cakes; has knowledge of sanitation and safety equipment, decoration of desserts, and preparation of desserts, almond paste, and gum paste.

### *Other information*

Branches 1-2

These two branches came under voluntary certification April 12, 1978.

Branch 3

This trade came under voluntary certification August 15, 1981.

Ontario Regulation 498/81.

### **Cook**

This trade comprises two branches:

Branch 1 – Assistant Cook

Branch 2 – Cook

### *Educational requirements*

Both branches

Grade 10 or equivalent.

### *Length of program*

Branch 1 – Assistant Cook

One period of 2000 hours, including one in-school session of 15 weeks.

Branch 2 – Cook

Three periods of 2000 hours, including two in-school sessions of 15 weeks each.

### *Minimum wages*

Branch 1 – Assistant Cook

65 per cent of journeyman assistant cook's wage.

Branch 2 – Cook

65, 75, and 85 per cent of journeyman cook's wage per period.

### *Duties and skills*

Branch 1 – Assistant Cook

Prepares and assembles complete breakfasts, short order grills, sandwiches, simple salads, simple desserts, vegetables, and non-alcoholic beverages; carves cooked meats, poultry, and game; has a working knowledge of table service, soups and sauces, weights and measures, hygiene, equipment handling, sanitation, and safety.

Branch 2 – Cook

Prepares and assembles complete meals, short order grills, sandwiches, vegetables, hot and cold buffets, salads and dressings, desserts, and non-alcoholic beverages; carves cooked meats, poultry, fish, and game; has a working knowledge of table service, soups and sauces, weights and measures, hygiene, equipment handling, sanitation, and safety; has a knowledge of stock control, receiving, issuing, menu planning, and food costing and purchasing.

### *Other information*

Branch 1 – Assistant Cook

This trade came under voluntary certification November 17, 1976. Graduates of the assistant cook trade may apply the time spent in this program toward the cook training program should they wish to continue their studies.

Branch 2 – Cook

This trade came under voluntary certification November 1, 1964.

Ontario Regulation 791/77.

### **Dry Cleaner**

### *Educational requirements*

Grade 10 or equivalent.

### *Length of program*

Four periods of 900 hours each, including a correspondence course for related in-school training.

### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

### *Duties and skills*

Operates machines to dry clean, with chemical solutions, clothing, textile furnishings, and similar articles; may sort articles according to colour and condition and type of material, and remove spots or stains by rubbing them with solvent; may filter solution after use to make it fit for re-use; when machine cleaning is unsuitable or unavailable, cleans by hand with a chemical solution; examines articles to ascertain condition and type of material and decides on type of treatment to be given; may clean upholstered furniture; removes, with chemical solution or substance, spots and stains from clothing, textile furnishings, leather goods, and similar articles; may wash articles before removing spot or stain; smooths and shapes clothing, textile furnishings, and similar articles by means of a pressing machine.



#### *Other information*

This trade came under voluntary certification February 1, 1967.

Ontario Regulation 30/70.

#### **Hairstylist**

This trade comprises three branches:

Branch 1 – Barber

Branch 2 – Hairdresser

Branch 3 – Hairstylist

#### *Educational requirements*

All branches

Grade 9 or equivalent.

#### *Length of program*

Branches 1 and 2 – Barber and Hairdresser  
Three periods of 1500 hours per period, including two in-school sessions of 8 weeks each.

Branch 3 – Hairstylist

Three periods of 1580 hours per period, including three in-school sessions of 8 weeks each.

#### *Minimum wages*

All branches

50, 70, and 90 per cent of journeyman's wage per period.

#### *Duties and skills*

All branches

Tints, bleaches, or dyes hair; shampoos hair and scalp; gives hair and scalp treatments; cleans or dresses artificial hair pieces; cuts and trims hair; curls or waves hair by any means; combs or brushes hair; shapes, colours, or treats eyebrows or eyelashes; performs any other operation with respect to dressing hair to obtain an intended effect or according to a particular style. In addition, branch 1, barber, shaves or trims beards or moustaches; branch 2, hairdresser, gives facials and manicures and applies make-up; branch 3, hairstylist, performs all of the above.

#### *Other information*

A person may also become a barber, hairdresser, and/or hairstylist by registering with a licensed private school and paying the tuition fee. A list of schools in Ontario is available from the Skills Development Division, Operations Branch.

The present regulation for hairstylist came into effect December 31, 1978.

Ontario Regulation 949/78.

#### **Radio and TV Service Technician**

##### *Educational requirements*

Grade 10 or equivalent.

##### *Length of program*

Four periods of 2000 hours, including two in-school sessions of 18 weeks each.

##### *Minimum wages*

40, 50, 60, and 80 per cent of journeyman's wage per period.

##### *Duties and skills*

Installs, adjusts, and repairs radio and television receivers and other domestic electronic equipment; makes adjustments to obtain desired density, linearity, focus, colour, and size of television pictures; isolates and detects defects by the use of schematic diagrams, volt meters, generators, oscilloscopes, and other electronic testing instruments; tests and changes electronic and solid-state components; repairs loose connections and repairs or replaces defective parts by the use of hand tools and soldering irons; understands electronic theory and shop techniques. *Does not include* the manufacture of radio, television, amplifier, or other related electronic equipment; and does not necessarily include the repair and maintenance of such equipment in an industrial plant, nor the wiring of such equipment to an external power source.

##### *Other information*

This trade came under voluntary certification December 1, 1966.

Ontario Regulation 221/74.

#### **Service Trades**

##### **Non-regulated**

#### **Butcher**

##### *Educational requirements*

Grade 10 or equivalent.

##### *Length of program*

Four periods of 1800 hours each.

##### *Minimum wages*

40, 50, 60, and 70 per cent of journeyman's wage per period.

##### *Duties and skills*

Carries out slaughtering, skinning, cleaning, and hanging operations, in accordance with government regulations and acts; bones and trims various types of meat carcasses – i.e., beef, veal, lamb, and pork – into marketable retail cuts; may make various kinds of sausages and prepare special meats and fancy meat products.

#### **Furrier**

##### *Educational requirements*

Grade 10 or equivalent.

##### *Length of program*

Three periods of 2000 hours each.

##### *Minimum wages*

50, 60, and 70 per cent of journeyman's wage per period.

##### *Duties and skills*

Makes, alters, restyles, and repairs fur garments; estimates cost of new garments, alterations, renovations, and repairs; selects and modifies patterns for fur garments to suit customer's size and style preferences; grades, sorts, and matches furs to be used; cuts, joins, lays out, stretches, and trims sewn parts to conform to pattern and design; assembles and sews fur parts and lining to produce finished article; repairs garments by cutting out worn or damaged skins, cutting matching replacement furs to size, and sewing in place.

#### **Horticulturist**

This trade comprises two branches:

Branch 1 – Nursery, Garden Centre, and Greenhouse Worker

Branch 2 – Groundskeeper, Greenskeeper, and Landscaper

##### *Educational requirements*

Both branches

Grade 10 or equivalent.

##### *Length of program*

Both branches

Three periods of 1500 hours each, including three in-school sessions of 8 weeks each.

##### *Minimum wages*

Both branches

Not less than the minimum wage prescribed by the Employment Standards Act plus an additional 30 per cent of the minimum wage during the first period, 60 per cent of the minimum wage during the second period, and 90 per cent of the minimum wage during the third period.



**Duties and skills**

Branch 1 – Nursery, Garden Centre, and Greenhouse Worker

Plants, cultivates, and harvests trees, shrubs, and ornamental and flowering plants; plants, transplants, and sells related horticultural products; sprays and fumigates plants; grafts buds on trees of different varieties; prepares shrubs and trees for transplanting in bare-root or root-ball conditions; prepares flats in a greenhouse by filling them with earth and mixing humus and fertilizer; plants flower seeds; transplants seedlings to flats and plants to outside beds; prunes trees and shrubs.

Branch 2 – Groundskeeper, Greenskeeper, and Landscaper

Prepares sites by excavating, hauling, and spreading soils and aggregates; develops and maintains turf and fine turf by fertilizing, seeding, sodding, regrading, and irrigating; plants trees, shrubs, flowers, and bulbs; maintains flowers, shrubs, trees, and all other related plant materials by pruning, cultivating, irrigating, and mowing; installs flagstones, concrete, asphalt, and timber in the construction of landscape areas; develops and maintains recreational and ancillary areas.

**Retail Meat Cutter**

*Educational requirements*  
Grade 10 or equivalent.

*Length of program*

Two periods of 2000 hours each, including one in-school session of 18 weeks.

*Minimum wages*

50 and 60 per cent of journeyman's wage per period.

**Duties and skills**

Bones and trims various types of meat carcasses – i.e., veal, beef, lamb, and pork – into marketable retail cuts; may make various types of sausages and prepare special meats and fancy meat products; may also carry out poultry and fish preparation.

**Miscellaneous Trades**  
**Non-regulated**

There are training programs for over 200 non-regulated trades in Ontario. Some of the more popular ones are listed here, along with the number of training hours involved in each. Graduate apprentices are awarded Certificates of Apprenticeship as evidence of having attained the journeyman level of knowledge and skill.

New apprenticeship training programs can be developed on request. The programs are usually custom-designed to meet the exact requirements of particular jobs and employers.

Auto Upholsterer  
Three periods of 1800 hours each.

Electro-Plater  
Four periods of 1800 hours each.

Foundryman (Coremaker)  
Two periods of 2000 hours each.

Foundryman (Moulder)  
Four periods of 2000 hours each.

Ironworker (Plant)  
Three periods of 2000 hours each.

Jockey  
Three periods of 1800 hours each.

Optics Technician  
(Lens and Prism Maker)  
Four periods of 2000 hours each.

Pipefitter (Industrial)  
Three periods of 2000 hours each.

Plastics Technician  
Three periods of 2000 hours each.

Plumber (Plant)  
Four periods of 2000 hours each.

Ship Builder (Joiner)  
Four periods of 2000 hours each.

Ship Builder (Ship Plater)  
Four periods of 2000 hours each.

Steel Mill Worker (Blast Furnace)  
Four periods of 2000 hours each.

Steel Mill Worker (Rolling Mill)  
Four periods of 2000 hours each.

Upholsterer (Furniture)  
Four periods of 2000 hours each.

## Operations Branch Offices

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For more information, please contact a training consultant at the Operations Branch office (Skills Development Division) nearest you.

Barrie	(705) 737-1431
Belleville	(613) 968-5558
Bracebridge	(705) 645-8643
Brantford	(519) 756-5197
Brockville	(613) 342-5481
Chatham	(519) 354-9100
Cornwall	(613) 938-9702
Hamilton	(416) 521-7764
Kenora	(807) 468-3325
Kingston	(613) 547-2271
London	(519) 453-7190
North Bay	(705) 474-5546
Oakville	(416) 842-2454
Oshawa	(416) 576-0171
Ottawa	(613) 731-7100
Owen Sound	(519) 376-5790
Pembroke	(613) 735-3911
Peterborough	(705) 743-4172
St. Catharines	(416) 684-8543
Sarnia	(519) 542-7705
Sault Ste. Marie	(705) 942-4420
Sudbury	(705) 675-4481
Thunder Bay	(807) 475-1605
Timmins	(705) 264-2354
Toronto Central	(416) 965-4211
Toronto East	(416) 750-3533
Toronto West	(416) 233-3281
Waterloo	(519) 884-5460
Windsor	(519) 254-8654

Toll-free calling may be available from your area; look under *Government-Ontario* in your telephone book.

### Occupational Health and Safety

Information about the Occupational Health and Safety Act, 1978, and related matters is available from the Ministry of Labour and the faculties of universities and community colleges throughout Ontario. Occupational Health and Safety Resource Centres are operated by Queen's University, Lakehead University, University of Waterloo, and The University of Western Ontario.

### Women in skilled trades

#### YES I CAN!

This short documentary film about successful women apprentices and journeymen helps dispel the male mystique that too often surrounds certain trades. With cheerful good humour, the subjects describe the joys and frustrations of working at traditionally "male" occupations. For more information, telephone (416) 965-4203.